

**I. List: 205.601 Synthetic substances allowed for use in organic crop production**

**II. Category Use(s)**

- (a) As algicide, disinfectants, and sanitizers, including irrigation system cleaners.
- (i) As plant disease control.

**III. Committee Summary:** The renewal of hydrogen peroxide was deferred for two reasons. First, the Crops Committee thought that more information and public comment was needed, and second, because of concern that there was no OFPA category that specifically allows its use.

Review of the Technical Evaluation Report for hydrogen peroxide shows that the substance does not occur naturally, but poses no true threat to the environment because it easily breaks down into water and oxygen, or hydrogen and hydroxyl depending on pH. The potential uses of hydrogen peroxide include: disinfectant, bleaching agent, oxygenator, carrier for foliar sprays, aeration in compost piles, and as vapor phase hydrogen peroxide, an inhibitor of post-harvest decay of table grapes. Pure hydrogen peroxide has an oxygen content of 47% and is relatively stable. While almost exclusively used in low concentrations, in concentrations greater than 50% hydrogen peroxide can cause burns, and at concentrations above 8% it can be corrosive, because oxygen readily combines with other elements. In field sprays, the release of oxygen when hydrogen peroxide is applied to plants enables them to more easily take up nutrients through their leaves, and is considered to be a safe fungicide. Hydrogen peroxide is used to eliminate bacteria in fresh vegetable and fruit packing sheds. Hydrogen peroxide in diluted forms is used by humans as a mouthwash and an antiseptic. There are no known cases of hydrogen peroxide causing environmental contamination.

All public comments, except one, were in favor of keeping hydrogen peroxide on the National List. The lone dissenter was against any synthetics being used in organic production of any kind, but the commentator provided no evidence of how the substance violated the OFPA. Most commentators agreed that there are no known adverse impacts on humans or the environment from either the use or manufacture of hydrogen peroxide. Most of the commentators stated that there are no other similar products available that are more compatible with organic crop production practices, and that the availability of hydrogen peroxide probably lessens damage to the environment and harm to humans by lowering the amount of toxic substances used as alternate measures.

Regarding whether the OFPA provides an exemption category that would permit hydrogen peroxide to be considered for inclusion on the National List, the NOP provided feedback to the NOSB that hydrogen peroxide could be considered a “production aid” under section 6517 of the OFPA. As a result, hydrogen peroxide would be eligible for continued use in organic production.

**IV. Committee Recommendation:**

**Recommendations based upon comments received – 205.601(a) and 205.601(i)**

The Crops Committee recommends renewal of the following material in this use category:

**(a) As algicide, disinfectants, and sanitizers, including irrigation system cleaners.**

**(4) Hydrogen peroxide.**

**(i) As plant disease control.**

**(4) Hydrogen peroxide.**

*Motion: Kevin Engelbert      Second: Jeff Moyer*  
*Committee vote: 3-0    Absent (Delgado, Ostiguy)*

*Board vote:*